TEACHERS' RETIREMENT BOARD

INVESTMENT COMMITTEE

SUBJECT: Business Plans for 2002/2003	ITEM NUMBER: 9
	ATTACHMENTS: 7
ACTION: X	DATE OF MEETING: July 10, 2002
INFORMATION:	PRESENTER: <u>Christopher Ailman</u> <u>& The Investment Directors</u>

Executive Summary:

Attached are the 2002/2003 Investment Branch Long-Term Financial Plan and Business Plans for the Investment Committee's approval. These plans identify the market environment, challenges and opportunities, the game plan for the next year, as well as the next three years. With the Committee's input and approval, the Investment Branch will proceed to implement these plans. Any changes either created by the environment, staff, or by the Board, will first be discussed with the Investment Committee. This packet contains the following:

- a. Investment Branch Long-Term Financial Plan
- b. Operations Business Plan
- c. External Equity Business Plan
- d. Internal Equity Business Plan
- e. Fixed Income Business Plan
- f. Alternative Investments Business Plan
- g. Real Estate Business Plan

Background & Discussion:

As the leader for the Investment Branch, the Chief Investment Officer (CIO) has endeavored to inspire the shared vision of the Branch as a \$100 billion asset management company. That vision requires the Branch to be a world leader in the pursuit of excellence in every function of the organization. Critical to this vision is thinking and operating like a business by developing near-term and long-term business plans. We would never consider investing in a company, if it did not have a clear business plan for the future. We should also expect the same of ourselves.

Annually each Director presents a one and three year business plan for their respective unit; just as a corporate Vice-President would present a business plan for their subsidiary to the Board of Directors. To provide a broad backdrop for the near-term business plans, the CIO develops a 10-year financial plan. These plans assist the CIO and Investment Committee in thinking about the

Investment Committee - Item - 9 July 10, 2002 Page 2

future direction for the Investment Branch, as well as potential challenges and opportunities. The CIO and Directors seek the Committee's input and comments on the plans. Once adopted staff will proceed to "work our plan."

The format of this year's plans was developed from a prior years template, and from the "best of breed" business plans of which a leading venture capital firm provided. Each business unit has attempted to set the stage of the environment they expect to face next year and the challenges and opportunities therein. The units also detail the management plan, resources utilized, and the future resource needs.

Recommended by

Christopher Ailman & the Investment Team

Chief Investment Officer

LONG-TERM FINANCIAL PLAN

To be effective in building a quality investment management organization, it is crucial to have a long-term financial plan. Clearly future events may change the landscape and would require adjustment to the plan, but by having a long-term plan these shifts are easier to manage. Developing a long-term business plan is relatively new ground for public pension plans, most only plan year to year through the traditional budget process. To the best of staff's knowledge, CalSTRS is among only a handful of State pension funds in the country to develop and utilize a 10-year business plan.

The attached financial plan is based upon the expected growth of assets. Obviously future results will deviate, the first two years serve as an example of that fact. The plan is built off assets under management, because it is the primarily driver of workload and costs¹. The first chart, depict the potential growth of assets based upon the CalSTRS capital market assumptions. The range is based upon one standard deviation of the investment return over the next 10 years. It incorporates the actuary's assumptions on benefits, cash flow, and growth of the other CalSTRS retirement plans such as the Supplemental Defined Benefit and 403(b) plan. The plan does not assume the addition of any new pension programs.

The other driver of costs is the complexity of the program. A fund invested in passive index funds would have the lowest cost, while a Fund such as CalSTRS that has engaged in several specialty focus portfolios has a higher costs and personnel count. Please note that the overall plan assumes the current investment portfolio and activities grow with the assets. If the fund continues the current pace of new specialized programs or portfolios the Personnel count and costs will rise. This current plan does not include any new additional programs or significant changes in asset management structure.

The table on page 4 of this attachment illustrates the costs borne by the three investment branch budgets, the CalSTRS budget, continuous appropriation budget, and the soft dollar budget. All totaled, current costs decline from about 10 basis points this year to below 8 basis points in the future. This plan assumes external investment manager fees will decline with two sets of fee breaks across all assets classes due to the economies of scale as assets grow. It is assumed that will decline. Since the investment portfolio is designed to generate 9.1% or 910 basis points, the total cost of less than 10 to 8 basis points is minor by comparison.

The significant driver of costs is the external management fee of \$81 million, which represent 80 percent of the total budget. The next largest costs to the portfolio are only one-twentieth the size; investment staff salaries at \$4 million and the custodian cost at \$3.5 million. The enormous weight of external management fees, compared to staff costs, illustrates one aspect of the trade-off between internal and external management.

¹ Based upon a annual survey of over 55 State sponsored public pension plans; "size drives budget"

Attachment 1a Investment Committee – Item 9 July 10, 2002

Looking out over the next five to ten years, external management fees will exceed \$ 90 million and over \$130 million respectively. Without any comment as to whether these levels are appropriate of not, they do draw up the issue of the lower cost structures of passive management and internal management. Passive management both internal and external costs only a fraction of one basis point. Internally passive and even enhanced management strategies can be operated at one-half of a basis point. Based on other State and Corporate pension plans as well as Endowments the cost structure for active in-house management is clearly higher. However, it is still significant lower than external active management fees. The real issue lies in the ability to add alpha above the index net of fees.

From talking to other plans, it is quite clear that the governmental business model - structure - is a significant inhibitor to the successful implementation of active management styles. The experience of Corporate plans, Endowments, and a select group of other State plans, such as Delaware, South Dakota, and Cassie Depot and Province of British Columbia in Canada, have shown that a different business model must be used to provide the optimum environment for active management to succeed over time. While this is a complex issue for another time, it is a discussion the Committee will need to undertake in the future.

In conclusion, with any plan the ultimate goal is not the management of the investment branch, but rather generating a strong consistent return. Staff believes this type of planning and forethought will help the Committee and senior management design and manage an investment operation to meet the overall CalSTRS investment objectives.

CalSTRS 10 YEAR COMPREHENSIVE BUDGET PLAN:

CalSTRS Budget, Continuous, Soft Dollar

	June 2001		Jun	<u>re-2002</u>	June-	-2003	Jun	<u>re-2004</u>	Jı	une-2005	Ju	ine-2006	Ju	une-2007	Jı	ine-2008	Jι	ine-2009	Ju	ne-2010	Ju	ine-2011
Total	\$	103.0	\$	100.5	\$	108.8	\$	117.6	\$	126.9	\$	136.9	\$	147.3	\$	158.3	\$	169.9	\$	182.0	\$	194.7
TOTAL PY's		57		61		68		73		78		83		88		94		100		106		112
PY's per \$1 Bil		0.55		0.61		0.63		0.62		0.61		0.61		0.60		0.59		0.59		0.58		0.58
Staff additions		6		4		7		5		5		5		5		6		6		6		6
Avg. Salaries		70,264		72,811		75,724		78,753		81,903		85,179		88,586		92,130		95,815		99,648		103,633
Salaries		4,005,036		4,441,501	5	5,149,229		5,748,962		6,388,436		7,069,869		7,795,596		8,660,198		9,581,496		10,562,641		11,606,947
Operating Exp. & Equip.	\$	58,300	\$	98,800	\$ 1	127,980	\$	140,870	\$	156,960	\$	174,918	\$	194,965	\$	217,349	\$	242,347	\$	270,269	\$	301,465
Other as a % of CalSTRS Budget		1.4%		2.2%		2.4%		2.4%		2.4%		2.4%		2.4%		2.4%		2.5%		2.5%		2.5%
TOTAL CalSTRS BUDGET	\$	4,063,336	\$ 4	1,540,301	\$ 5,2	277,209	\$ 5	5,889,832	\$	6,545,396	\$	7,244,787	\$	7,990,561	\$	8,877,547	\$	9,823,843	\$ 1	10,832,910	\$:	11,908,412
Expense ratio		0.0039%		0.0045%	0	0.0049%		0.0050%		0.0052%		0.0053%		0.0054%		0.0056%		0.0058%		0.0060%		0.0061%
		4.3%		4.4%		5.7%		6.2%		6.4%		6.6%		6.7%		7.3%		7.5%		7.7%		7.9%
Continuous Appropriation																						
Investment Managers		81,140,000	89	,010,580	76,5	560,187	78	3,285,613		84,188,119	9	90,437,674		97,032,078		98,498,804	1	05,400,364	11	12,633,398	12	20,200,540
Custodian		3,600,000	3	3,600,000	3,7	700,000	3	3,885,000		4,079,250		4,283,213		4,497,373		4,722,242		4,958,354		5,206,272		5,466,585
Professional Services (Pathway,																						
Legal, Consultants, inter Agcy.		1,985,000	2	2,084,250	2,1	188,463	2	2,297,886		2,412,780		2,533,419		2,660,090		2,793,094		2,932,749		3,079,387		3,233,356
Travel		175,000		250,000	3	350,000		385,000		423,500		465,850		512,435		563,679		620,046		682,051		750,256
Misc.		945,000		982,800	1,0	022,112	1	,062,996		1,105,516		1,149,737		1,195,726		1,243,556		1,293,298		1,345,030		1,398,831
TOTAL CONTINUOUS	\$	87,845,000	\$ 5	95,927,630	\$ 83	3,820,762	\$	85,916,495	\$	92,209,165	\$	98,869,893	\$	105,897,703	\$	107,821,374	\$	115,204,811	Ş	122,946,137	\$	131,049,568
		93.2%		93.0%		91.0%		90.3%		90.0%		89.6%		89.3%		88.4%		88.0%		87.6%		87.2%
SOFT DOLLAR BUDGET																						
Research & Market Data		1,900,218	2	2,128,244	2,3	383,633	2	2,669,669		2,990,030		3,348,833		3,750,693		4,200,777		4,704,870		5,269,454		5,901,789
Software & Equipment		476,200		533,344	5	597,345		669,027		749,310		839,227		939,934		1,052,726		1,179,054		1,320,540		1,479,005
TOTAL SOFT DOLLAR	\$	2,376,418	\$ 2	2,661,588	\$ 2,9	980,979	\$ 3	3,338,696	\$	3,739,340	\$	4,188,060	\$	4,690,628	\$	5,253,503	\$	5,883,923	\$	6,589,994	\$	7,380,794
		2.5%		2.6%		3.2%		3.5%		3.6%		3.8%		4.0%		4.3%		4.5%		4.7%		4.9%
TOTAL EXPENSES	\$	94,284,754	\$ 10	103,129,519	\$ 92	2,078,949	\$	95,145,024	\$	102,493,901	\$	110,302,741	\$	118,578,891	\$	121,952,424	\$	130,912,577	\$	140,369,041	\$	150,338,774
% of ASSETS (BPs)		9.15	-	10.26		8.46		8.09		8.07		8.06		8.05		7.70		7.71		7.71		7.72



OPERATIONS

Assets under operational risk \$106.3 billion (Total Assets plus Lending Collateral)

Business uni	ts:	Personnel Years
*	Cash Management & Trade Settlements	5.0
*	Portfolio Accounting, Performance & Reporting	6.0
*	Technology / System Integration	2.5
*	Support Staff	<u>1.0</u>
Total Staff		14.5

Potential growth over the next 5 years:

\$ In Billions

	6/30/02	02-03	03-04	04-05	05-06	06-07
Total CalSTRS Assets	\$100.0	\$107.7	\$115.9	\$124.7	\$133.9	\$143.7
Lending Collateral Assets	\$6.3	\$7.0	\$7.0	\$8.0	\$8.0	\$9.0
# Of External Portfolio/Mgrs	56	58	58	58	58	58
# Of Internal Portfolio/Mgrs	16	16	16	16	16	16
# Of Service Providers	28	30	32	34	36	38
# Of Total Investment -	69	76	81	86	91	96
Personnel Years						
Operations Personnel Years	14.5	15.5	15.5	16.5	17.5	18.5

OBJECTIVES

The Investment Operations mission is to provide the essential services and support for all of CalSTRS investment activities and relationships while managing and mitigating risk. Investment Operations provides securities trade order processing, custodian communication for settlements and accounting, management reporting, systems network and Information Technology development, as well as various office services functions.

MARKET OPPORTUNITY / ENVIRONMENT

Technology is the cornerstone that helps ensure that we continue to provide our customers (investment staff and others) with state-of-the-art financial services. Furnishing the Investment Branch with the technology needed to drive our business forward is an increasingly complex task. It can put us well ahead of the curve with regard to industry initiatives such as T+1 settlement, straight-through processing, real-time reporting and business continuity.

The forces of change, such as, the convergence of financial services, technological development and globalization are transforming the financial services industry. These changes are increasing the complexity of financial institutions and generating new legislation and regulation. These changes are introducing sources of risk that put a renewed emphasis on risk assessment and compliance management.



CURRENT YEAR BUSINESS PLAN (2002-2003)

Upgrade Thomson's Portfolio Investment Accounting, Performance and Reporting system to add capacity and increase performance and reliability. This system is used in support of internally managed equity and fixed-income portfolios.

Continue system development and deployment efforts for the electronic trade delivery processing between front office, back office and the custodian bank. Research alternative methods to improve our semi-automated equity trade matching process and manual fixed income broker confirmation process in preparation for T+1 settlement environment.

Review, update and test middle / back office business continuity plans. Participate in forums for securities firms, industry organizations, and service providers to share specific plans and business continuity information. Identify and develop business continuity plans and projects that have a branch / department-wide, rather than unit-specific, focus.

Plan and coordinate with the Fixed Income Unit the implementation of the Fixed Income Benchmark transition.

Assess the impact of approved business plans for all Investment Units, as well as all departmental initiatives and program changes that are in line with the long-term strategic plan.

Identify and quantify financial risks, develop risk management strategies, and recommend policies and procedures to ensure a fully integrated risk management framework to meet investment objectives. Conduct organizational and operational reviews of certain investment functions relative to industry best practices for financial institutions.

MANAGEMENT& RESOURCES

The Operations Unit is comprised of three functional service oriented groups as shown in the organizational chart below. The functional groups are: 1) Cash Management & Trade Settlements, 2) Portfolio Accounting, Performance & Reporting (PORTIA), 3) Technology / System Integration.

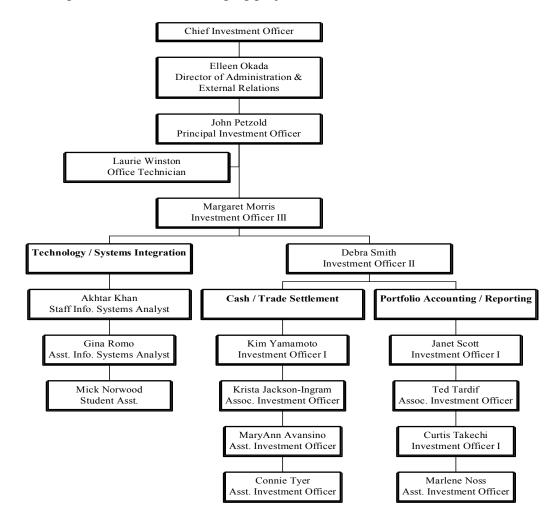
Investment Operations is committed to providing a high level of service to all its customers both internal and external. Our staff is respected for its security operations and technology expertise; we diligently make every effort to take our customer service to new levels. Continuing educations is essential to provide this level of service and support.



The Cash Management & Trade Settlements and PORTIA groups will experience higher activity due to the recent change in the Equity and Fixed Income Benchmarks. The increased activity is the result of the transition to the new benchmark as well as a greater number of positions held in internally managed portfolios.

Investments Branch has undertaken a significant imaging project that will require considerable hardware and technology resources to implement and maintain during the upcoming years. The first phase of this project is directed toward proxy document management followed next by private equity partnership documents.

The Operations Unit plans to add one Personnel Year to the Technology / System Integration group to accommodate the increase in demand for technology service, in part due to implementation of our Imaging project.





SUCCESS FACTORS

One major factor for success is hiring and retaining qualified staff to ensure delivery of the highly specialized, state-of-the-art operations, systems and processes in the coming years. Recruiting, retaining and developing staff is a high priority. Operations staff is required to have broad knowledge and experience about the diverse and complex investments within each asset class.

The effective use of technology is becoming an ever-greater priority. This is driven by the increased availability of technology to more effectively support our investment division, the increased levels of investment required in technology to maintain status quo, and the need to maximize the value achieved for the amount spent.

FUTURE DIRECTION

Increase in Investment staff, new programs and investments, operating changes in the global financial market place and the evolution in technology create challenges and opportunities for our service oriented Operations Unit. Critical evaluation of each situation is required to ensure that we institute the best solution considering all aspects. Additional staff is expected beyond 2004 in order to maintain the current level of service.

Compressed settlement cycles in all markets are occurring to reduce settlement risk. The Straight-Thru Processing (STP) puzzle suggests a greater emphasis should be placed on achieving internal and external automation. CalSTRS must design for a new business model for STP with T+1 as one of the implementation milestones.

CONCLUSION

- ➤ Investment Committee Objectives
 Present T+1 and Straight-Thru Processing expectations and readiness.
- ➤ 2003-2004 Budget Change proposals

 No BCP submitted for this fiscal year.

Attachment 3c Investment Committee – Item 9 July 10, 2002

External Equity & Corporate Governance

Assets under management \$47.5 billion

Business unit	ts:	Personnel Years
*	Active and passive external equity managers	4.5
*	Corporate Governance	5.0
*	Support Staff	<u>1.0</u>
Total Staff		10.5

Potential growth over the next 5 years:

In Billions

	6/30/02	02-03	03-04	04-05	05-06	06-07
Total CalSTRS Assets	\$100.0	\$107.7	\$115.9	\$124.7	\$133.9	\$143.7
External Equity Assets (47.5%)	\$47.5	\$51.2	\$55.1	\$59.2	\$63.6	\$68.3
# of US Managers	19	19	19	19	19	19
# of Non-US Managers	19	19	19	19	19	19
Expected investment returns*	(\$4.1)	\$4.1	\$4.4	\$4.7	\$5.1	\$5.5
Personnel Years	10.5	10.5	12.5	12.5	13.5	13.5

^{* -} This is based upon CalSTRS long-term capital market assumptions. Future returns cannot be guaranteed and the actual return will deviate from the projection.

External Equity

OBJECTIVES

For the domestic equity portfolio, the objective is to earn 50 bp over the stated plan benchmark, currently the R3000 tobacco free index; and for the international equity portfolio, the objective is to earn 50 bp over the stated plan benchmark, currently ACWI-exU.S. tobacco free index.

MARKET OPPORTUNITY / ENVIRONMENT

Market returns for this asset class are expected to be significantly below those of the past decade. This is true for both the domestic and international markets, with volatility being much greater than in the past. This environment necessitates closer management of the external equity managers by staff. Staff will also need to closely monitor asset allocation levels to ensure compliance with policies, and to manage unintended style drifts. It will be important to review strategies that account for the long-term secular decline and increased volatility to produce incremental returns above the plan benchmarks. Retention of experienced investment professionals, recruitment of additional staff and training and development will be critical.



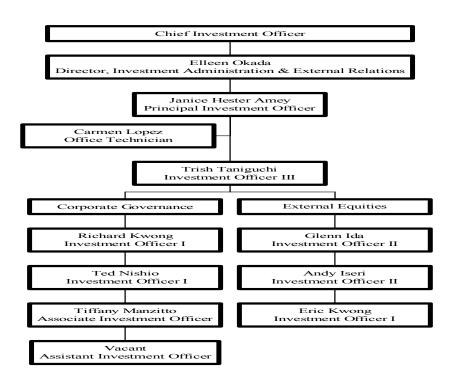
CURRENT YEAR BUSINESS PLAN (2002-2003)

External Equity staff will review asset allocation posture, style and sector biases, and review and execute overall investment management plan targets set in October 2001. We will review the defined contribution plans offered by the fund, including 403(b) and 457 plans. We will also review and evaluate corporate governance funds. These funds are designed to unlock value by using corporate governance measures as a catalyst. Generally, these are structured as partnerships, even though the asset class is public equity. We will evaluate the strategy as vehicles for both internal and external management.

MANAGEMENT & RESOURCES

People will continue to be the most important resource. Additional software and research tools for monitoring the public equity markets and portfolios, as well as Corporate Governance markets, will be necessary. The public equity asset class has requested one additional position for the unit over the 2003-04 fiscal year. The staff in this asset group is currently managing an average of 10 managers each; we believe that more optimal results will be achieved with a lower ratio of accounts to managers.

Staff will continue to use software analytical tools such as Bloomberg, Vestek, Zephyr, Russell and BARRA. We will explore the capabilities of other service providers as well. We will continue to refine our evaluation process for investment management portfolios. We will also continue to benchmark our practices and processes with other large institutional investors, and enhance our understanding of market and industry factors through advisories and working groups.





SUCCESS FACTORS

Staffing for the challenging environment will be critical. Although the attraction of public investment careers has increased since the end of 2000, retention and recruitment issues will be important. In a difficult market, trading income and budget allocations will be more difficult to sustain; adequate resources must be maintained in order for the public equity asset class to thrive in this difficult macro environment.

FUTURE DIRECTION

At a minimum, we expect the public equity sector of the fund to continue to dominate the investment management structure. We will explore the feasibility of increasing our commitment to active strategies in an effort to provide incremental returns above the passive portfolios, as staff believes that there will be higher volatility. We expect to add more investment professionals and to increase the level of management expertise that will be necessary to competently address the incremental active management strategies that we will explore.

CONCLUSION

Investment Committee Objectives:

- 1. Active Equity Management Study
- 2. Emerging Markets Review
- 3. Study and Evaluate Emerging Manager Development Program

2003-2004 Budget Change proposals:

1. 1 additional professional position in the Investment Officer Series

Corporate Governance

OBJECTIVES

To manage the fund's corporate governance program, such as proxy votes, corporate actions and securities class actions filings consistent with the fund's investment management plan and fiduciary duty.

MARKET OPPORTUNITY / ENVIRONMENT

Staff believes that this program will continue to be under pressure, as the main asset class, public equities, are expected to show significantly lower returns, coupled with higher volatility over the next several years. It will be important to explore strategies that can make the best use of corporate governance avenues to correct excessive corporate behavior, restores confidence in the public markets and protects the rights of investors. The importance of retention of experienced investment/corporate governance professionals, recruitment of additional staff and training and development will be critical.



CURRENT YEAR BUSINESS PLAN (2002-2003)

The corporate governance program will review the overall CalSTRS portfolio for performance outliers, review the criteria that are used to assess corporate governance behavior, and explore international corporate governance activity at the fund. We will present an analysis of the current Corporate Governance Workplan and a new plan for the 2002-03 season. Staff will also continue to advance the issues that were identified in the Financial Reform Matrix.

MANAGEMENT RESOURCES & SUCCESS FACTORS

Corporate Governance will add one additional investment/corporate governance professional in the coming fiscal year. Staff will continue to require access to corporate governance services such as Proxy Edge, ISS, IRRC, PIRC, AICPA, the SEC, DOL, NACD, NYSE, NASDAQ, foreign institutional investors, such as ICGN and exchanges, Stanford Institutional Investor Forum, the Wisconsin Center for Corporate Governance, and the Delaware Center for Corporate Governance to manage this function. We will continue to work with other public funds to benchmark our efforts in this area and to enhance our understanding of the corporate governance industry and the market through advisories and working group forums. Please refer to the organization chart in the External Equity section.

FUTURE DIRECTION

The corporate governance program is expected to be very active. Many corporate excesses are being unwound and failures realized. As is true with the public equity asset class, retention and recruitment of experienced investment professionals will be key to facing this environment.

CONCLUSION

Subcommittee on Corporate Governance Objectives:

- 1. Present Corporate Governance Workplan Results for 2001-02;
- 2. Develop and present new plan for 2002-03; Continue to advance the Financial Reform Matrix.

2003-2004 Budget Change proposals:

1. 1 additional professional in the Investment Officer Series/Corporate Governance Series



Client Directed Brokerage Program

The objective of the client directed brokerage program is to take advantage of the industry accepted means of funding various investment goods and services by recapturing, either in the form of commission credits or cash rebates, a portion of the trade commissions paid to brokers. At the end of 2001, CalSTRS had a commission credit balance of \$4.9 million. These funds have been used to defray the costs of administering the plan.

CURRENT YEAR BUSINESS PLAN

- Evaluate and study commission recapture programs of other institutional investors:
- Develop and present a report on the program's activities to the Investment Committee;
- Review pool of client directed brokers for inclusion.



Attachment 4d Investment Committee – Item 9 July 10, 2002

INTERNAL EQUITY

Assets under management \$13.6 billion

Business uni	ts:	Personnel Years
*	S&P 500 ex-Tobacco Indexed Portfolio	2.00
*	Cash Equitization Program	1.00
*	Venture Capital Stock Distribution Program	1.00
*	Support Staff	<u>1.00</u>
Total Staff		<u>5.00</u>

Potential growth over the next 5 years: (In \$ billions, except where otherwise indicated)

	6/30/02	02-03	03-04	04-05	05-06	06-07
CalSTRS Total Assets	\$100.0	\$107.7	\$115.9	\$124.7	\$133.9	\$143.7
Indexed Portfolio ¹	\$13.5	\$16.3	\$17.6	\$17.5	\$18.8	\$20.2
Cash Equitization (\$ mil.)	\$125	\$202	\$217	\$234	\$251	\$269
Stock Distribution (\$ mil.)	\$75	\$150	\$200	\$250	\$300	\$350
Expected returns ²	-\$1.6	\$1.1	\$1.2	\$1.2	\$1.3	\$1.4
Personnel Years ³	5	5	5	5	5	5

¹ Allocation to domestic equity may fluctuate overtime.

Objectives

In 1998, Internal Equities (IE) was formed to implement a portion of the large capitalization segment of the passive component of the domestic equity allocation. As of May 31, 2002, IE was responsible for domestic assets totaling approximately \$13 billion. These assets represented approximately 13% of CalSTRS' total investment portfolio.

Since its inception, IE has expanded its scope of investment activities to leverage the investment expertise of its professionals. Additional investment areas of IE include:

Cash Equitization Program

The Cash Equitization Program provides a flexible way for CalSTRS to keep its exposure to domestic equities close to the strategic asset allocation policy target. The program enables CalSTRS to maintain total domestic equity market exposure and minimize expected tracking error without disturbing the domestic equity manager's investment process.

² Based upon CalSTRS long-term capital market assumptions. Due to market volatility, future performance may deviate from projection.

³ Additional staff would be required if the Investment Committee approves a new portfolio/program.



Venture Capital Stock Distribution Program

IE provides venture capital stock distribution liquidation services. The objective of this service is to return cash of a value equal to or greater than the market value of the distributed stock at time of distribution. The goal is to seek liquidity for the stock distributions, with intent to minimize downside risk while considering upside potential.

Market Environment and Opportunities

Equity Investment Strategies Overview

The investment strategies for equities can be divided into several groups generally distinguished by the amount of risk inherent in each respective strategy. Historically, CalSTRS' investment activities along the equity investment strategy continuum range from pure indexing to traditional active management (see chart below). For the majority of its public equity assets, CalSTRS targets pure indexing strategies. In the middle of the continuum are the traditional active funds. The Board expects these funds to outperform their benchmark over time.

IE's investment activities are focused in the pure and flexible index segments of the continuum and represent the low risk portion of the spectrum. Evolution in technology has enabled CalSTRS to be successful in this end of the spectrum. With the increasing knowledge of investment personnel, IE is well positioned to potentially expand its scope of investment activities to leverage this expertise. In the future, IE will be considering movement to enhanced strategies, the next level on the continuum.

The Equity Investment Strategy Continuum

Absolute Return

Aggressive Active

Traditional Active

Enhanced

Flexible Index

Source: Goldman, Sachs & Co.



Index Products

Investors have a wide range of methods for gaining exposure and hedging exposure to the broad market indices (domestic and non-domestic equities). In addition to the traditional buying (or selling) a portfolio of securities, investors can now choose alternative strategies that include: index futures, Exchange Traded Funds, swaps, privately placed structured products or other customized products. There are a number of public funds that have gained exposures to domestic and non-domestic equity in a variety of vehicles: (i) equities, (ii) futures, and (iii) swaps. The following section briefly describes two different investment strategies not currently utilized by CalSTRS.

Exchange Traded Funds (ETFs)

ETFs represent a portfolio of stocks designed to closely track an index or replicate a basket of stocks selected for particular investment strategy. The structure is similar to an ADR, they are exchange traded and are considered stocks. ETFs are particularly useful for equitizing cash, expressing views on sectors or styles, and transitioning between managers in addition to other uses. ETFs are increasing in popularity and are often responsible for approximately 50% of the daily trade volume on the American Stock Exchange (AMEX).

Swaps

A swap vehicle may be used to create synthetic exposure. Under a typical equity index swap agreement; two eligible contract participants agree to exchange performance attributable to a referenced index in return for a stream of payments based typically on LIBOR over a fixed period of time. Swaps can reference a variety of indices. For example, in a long MSCI EAFE swap, an investor pays a financing rate plus a spread and receives the price return index performance plus net dividends (the synthetic equivalent to the investor buying the index).

Portfolio Tracking Risk

The Investment Committee expects the passive domestic equity portfolio in aggregate to closely match the performance of the benchmark. Risk management is an important element of the investment process and establishes risk control by delineating potential sources of tracking error (portfolio variance from the benchmark). The results can be used to minimize the tracking error.

In May 2002, the Investment Committee adopted the Russell 3000 Index (ex-Tobacco) as the benchmark for the CalSTRS' domestic equity portfolio. After research and analysis by CalSTRS' investment staff and Pension Consulting Alliance, the Investment Committee directed staff to transition from the S&P 500 Index/Russell Small Cap Completeness Index (both ex-



Tobacco) structure to an alternative structure (Russell 1000/Russell 2000 Index; both ex-Tobacco). The latter structure better matches the performance of its benchmark (Russell 3000 ex-Tobacco Index). The assets are allocated between three managers. Approximately one-half of the total exposure to the Russell 1000 is managed by CalSTRS Internal Equities.

Two issues of interest to IE due to the transition are the risk and return characteristics of the aggregate passive portfolio versus its benchmark and the portfolio management impact due to the increase of corporate action activity as a result of a sizable increase in the number or stocks in the internal passive portfolio. Staff is planning to take aggressive steps to insure that any risks associated with the aforementioned items are minimized.

Current Year Business Plan (2002-2003)

IE continues to evaluate various equity investment strategies in the context of future business planning and places emphasis on identifying investment strategies that would enhance the CalSTRS equity investment portfolio. IE devised a list of topics for consideration by the Board in the upcoming year.

<u>Update the Investment Committee on the investment performance of the following portfolios:</u>
<u>(i) internal indexed portfolio and (ii) cash equitization program.</u> The objective of these reports is to provide the Investment Committee with investment results that correspond to the performance of these portfolios/programs.

Study the key issues associated with internal management of an enhanced portfolio. Enhanced mandates are a segment of the overall active component of the domestic equity portfolio. In 1999, the Investment Committee approved four managers to be used within the enhanced domestic equity segment. Since that time, Staff has been monitoring the activities and performance of these managers to gain a better understanding of their investment approaches. In summary, these managers apply various quantitative valuation techniques for selecting stock in each of their respective portfolios. Enhanced indexing encompasses using a series of strategies designed to add modest, risk controlled excess returns to a passive portfolio. Strategies can range from flexible timing on implementing index changes, utilizing derivatives or fixed income products, index sampling and market neutral strategies. Internal Equities will review the potential of an enhanced indexing that uses a combination of equity index futures contracts and fixed income products to add value to a passive portfolio.

Explore the potential use of equity future contracts for equitizing cash earmarked for non-domestic equities.

Expanding the current cash equitization program to include non-U.S. equities would help keep the non-domestic exposure in line with the adopted strategic asset allocation target. The



Investment Committee adopted the Morgan Stanley Capital International All Country World (ACWI) Index as its non-domestic equity benchmark. The issue for CalSTRS is whether to use a combination of non-domestic equity futures contracts to equitize cash quickly in order to minimize deviation between the performance of non-domestic equity asset class and the index. Staff will review the possible tradeoffs involved in using of equity future contracts for equitizing cash earmarked for non-domestic equities.

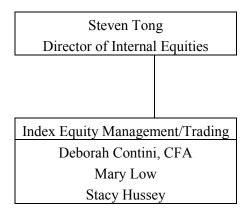
<u>Study the key issues associated with the uses of option strategies for venture capital stock distributions.</u> CalSTRS' investment in private equity partnerships results in stock distributions to investors. There are several strategies designed to reduce the risk of owning significant equity positions. CalSTRS may benefit from the use of options to implement specific hedging strategies. Staff will review the potential use of option strategies for venture capital stock distributions.

Internal Equities Management and Resources

The investment talent and expertise of the Internal Equities staff (IES) makes them a valuable resource to the CalSTRS investment program. The IES fulfills a variety of roles in the investment management of the internal domestic equity programs. As a result, IES must have extensive knowledge of portfolio management methods; a wide range of professional and technical skills; an in-depth awareness of factors that influence the valuation of domestic equity securities, equity index futures and options, and a thorough understanding of trading techniques.

The IE group is comprised of four professionals dedicated solely to the S&P 500 Indexed Portfolio, Cash Equitization Program, and Venture Capital Distribution Liquidation Program.

CALIFORNIA STATE TEACHERS' RETIREMENT SYSTEM INTERNAL EQUITIES ORGANIZATION CHART





The Director of IE provides strategic input and overall guidance to the group. Specifically, the Director monitors the investment policies and practices of the various investment portfolios/programs in order to maintain a consistent risk policy throughout the group. Three portfolio managers/traders as well as CalSTRS' back office operations and information technology staff support the IE unit.

Technology is also a valuable resource and a key to success in the management of internal domestic equity programs. Investment technology streamlines, automates, and integrates the investment management process. IES seeks to enhance the systems on an ongoing basis.

Success Factors

CalSTRS will continue with internal management of its indexed portfolio as long as the portfolio's performance and costs are competitive with outside management services. The long-term challenge for IE is to maintain a quality and efficient organization that consistently delivers the desired results. In order to meet this objective, IE continuously re-evaluates its internal management approach.

CalSTRS has achieved significant benefits through the integration of the management of the indexed portfolio with other broader events that are taking place within the overall investment portfolio. Manager transitions plan, rebalancings, and fundings are being accomplished more efficiently through the integration of the indexed portfolio as well as the tools and resources that managing the indexed portfolio brings to the process.

Due to the broad range of asset classes used by CalSTRS and their significant drift from the policy benchmarks, the complexities of the rebalancings as well as their size are significant issues. Overall plan risk management benefits from the internal management process due to the ability to implement the asset allocation process more efficiently.

Future Direction

As institutional investors become familiar with the challenges of equity investing, they are refining their risk-reward parameters to maximize investment efficiency and potentially uncover value in different markets. This section will discuss potential future directions and areas of consideration.

Study the key issues associated with bringing in a portion of the Extended Market Portfolio under internal management.

In 2002, the Investment Committee adopted the Russell 3000 Index (ex-Tobacco) as the benchmark for the domestic equity class. The passive component has two segments: a



large company segment and small company segment. The internal indexed portfolio represents approximately half of the large company segment and has been managed by Staff for over three years. CalSTRS will review and discuss several issues associated with internal management of an extended market portfolio (the small company segment).

<u>Study the key issues associated with bringing a portion of the MSCI EAFE Portfolio</u> under internal management.

In May 2000, staff presented to the Investment Committee a strategy for internal management of a passive MSCI EAFE portfolio. Staff indicated that it would bring back to the Investment Committee further details for an internally managed non-U.S. index strategy. Later this year, Staff will seek Board approval to begin developing and testing methodologies for managing a portion of its passive international equity portfolio internally (benchmarked to the Morgan Stanley Capital International Europe, Australasia, and Far East – MSCI EAFE).

Conclusion

In year 2002-2003, the Internal Equities investment staff recommends the following discussion topics for the Investment Committee:

- 1. Review investment performance of the internal indexed portfolio
- 2. Review investment performance of the cash equitization program.



FIXED INCOME

Assets under management \$28.0 billion

Business unit	ts:	Personnel Years
*	Fixed Income Assets (Long-Term and Short-Term)	8.5
*	Currency Hedging Program	1
*	Home Loan Program	2
*	Securities Lending Program	1.5
*	Support Staff	<u>1</u>
Total Staff		<u>14</u>

Potential growth over the next 5 years:

(In Billions, except where otherwise indicated)

	6/30/02	02-03	03-04	04-05	05-06	06-07
Total CalSTRS Assets	\$100.0	\$107.7	\$115.9	\$124.7	\$133.9	\$143.7
Fixed Income Assets ¹	\$27.0	\$29.1	\$31.3	\$33.7	\$36.2	\$38.8
Expected returns ²	\$2.2	\$1.8	\$2.0	\$2.1	\$2.3	\$2.4
Currency Hedging ³	N/A	N/A	N/A	N/A	N/A	N/A
Home Loan Program ⁴ (in mil.)	\$30.0	\$30.0	\$30.0	\$30.0	\$30.0	\$30.0
Sec Lending Program ⁵ (in mil.)	\$60.0	\$64.6	\$69.5	\$74.8	\$80.3	\$86.2
Personnel Years	14	15	16	16	17	17

- 1 Assuming 27% of assets (current strategic allocation).
- 2 6/30/02 returns estimated to be 8.0%; returns going forward based upon CalSTRS' long-term capital market assumption of 6.25%. Actual results will vary.
- 3 Estimated income on currency hedging is unavailable.
- 4 Based upon current coupon MBS of 6% on \$500 million. Actual results will vary.
- 5 Based upon 6 bps. on total assets. Actual results will vary.

FIXED INCOME ASSETS BUSINESS PLAN

OBJECTIVES

The fixed income assets within the CalSTRS Investment Portfolio include internally managed investment grade securities and externally managed high yield securities which, collectively, are expected to generate a risk-adjusted return that is representative of the broad market-weighted universe of U.S. bonds. The strategic performance objective for the System's fixed income portfolios is to consistently exceed the total return of the broad market-weighted benchmark by following an enhanced indexing strategy for the internally managed portion and an active strategy for the externally managed high yield portion. Incremental value shall be added by allocating assets among the different market sectors and by taking advantage of specific investment opportunities within each of those market sectors.



MARKET OPPORTUNITY / ENVIRONMENT

In June 2002, the CalSTRS Board adopted a new performance benchmark for the Fund's internally managed investment grade fixed income assets. This was noteworthy in that the previous fixed income performance benchmark (Salomon Bros. Large Pension Fund Index) was in place for fifteen years and operated within a customized, fixed sector-weighted framework. The new benchmark that was selected [Lehman Bros. U.S. Aggregate Index (ex Tobacco)] is designed to be representative of the sectors within the U.S. bond market, and is therefore classified as a broad market-weighted index.

The primary implication of the change in benchmarks is a significant expansion of the opportunity set available for investment within the internally managed fixed income portfolios. For example, the number of bond issues and market capitalization included within the customized Salomon Large Pension Fund Index is 2000 and \$4 trillion respectively, as compared to the Lehman U.S. Aggregate Index, with 6700 issues and a market capitalization of \$6.875 trillion. In other words, the new index will permit CalSTRS a broader range of fixed income investments along the yield curve. Furthermore, the new index will more accurately reflect the opportunity set available to fixed income investors.

CURRENT YEAR BUSINESS PLAN (2002-2003)

Given the expanded opportunity set of fixed income securities available as a result of the recently adopted U.S. Lehman Aggregate Index, staff will focus its efforts over the upcoming year on implementing the changes necessary to gain exposure to the characteristics of the index that are absent from the current internally managed portfolio structure. The portfolio restructuring will be done opportunistically over an extended time period, with an emphasis toward managing the risks associated with potential transaction costs and market impact.

In order to facilitate this transition, staff has begun to develop various trading and measurement strategies so as to monitor the progress being made toward integrating the characteristics of the new broad market-weighted index into the existing portfolio assets. Throughout this process, staff will also incorporate the characteristics of the externally managed high yield assets into the analysis, in order to monitor the risk profile of the entire fixed income portfolio. It is anticipated that by the end of the next fiscal year, the transition will be completed and the fixed income assets will be representative of the broad market-weighted benchmark selected for the asset class.

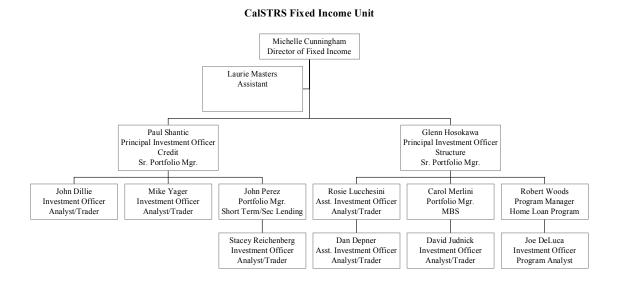


MANAGEMENT AND RESOURCES

Managing and overseeing the Board's strategic allocation to the short-term and long-term fixed income assets (both internally managed and externally managed) is the core function of most of the staff within the Fixed Income Unit. Many of the resource needs for the management of the fixed income assets can be addressed by continuing to update and enhance the technology currently in place and by continuing to invest in the staff responsible for the management of the assets, in the form of training and development. The management of the fixed income assets requires extensive knowledge of portfolio management methods, an in-depth awareness of the fluctuating fundamental and technical factors that influence the valuation of fixed income securities, and a thorough understanding of trading techniques. Furthermore, technology and training have become all the more important over the past several years as the markets have become much more volatile and asset structures have become much more complex.

In response to these shifting market dynamics, the team responsible for the direct management of the fixed income assets was restructured to take into account the two major risks within the fixed income markets: 1) credit risk and, 2) structure (interest rate) risk. Consequently, each senior portfolio manager has been assigned responsibility, based upon his expertise, to each of the two major risk factors, in order to more clearly highlight and control the credit or structure risk inherent in fixed income securities.

The CalSTRS Fixed Income Asset Management team is structured as follows:





SUCCESS FACTORS

The factors that will be critical to successfully accomplishing CalSTRS' strategic performance objectives reside in the education and experience of its staff and the resources made available to them that enhance their decision-making skills within the constantly evolving fixed income markets. Therefore, the challenge is to attract and retain employees that have a diverse range of skills in the fixed income markets that will enable CalSTRS to not only meet its objectives today, but also prepare for the future. In other words, the challenge is to equip staff with the resources to enable them to meet the Fund's financial goals.

However, given its size and stature in the financial markets, CalSTRS is uniquely positioned to face that challenge. In addition to continuously updating the technology to enable staff to access/analyze information that will impact the portfolio, and encouraging continuing education in the form of advanced degrees and certifications, the Fund also has access to the resources of its strategic partners on Wall Street and globally. The ability to tap into the intellectual resources of these firms is extremely useful in developing strategies and keeping staff educated on the most current issues in the markets. For example, the Fixed Income Unit has made it a practice to invite one or two of the most respected practitioners in areas of particular interest to present their knowledge to staff on a regular basis.

FUTURE DIRECTION

Looking forward, fixed income staff will continue to pursue opportunities and strategies designed to enable the Fund to meet its strategic performance objectives. As has been done in the past, new structures, sectors, and products will be explored in terms of risk management, diversification, and suitability for a portfolio the size of CalSTRS'. The vision which staff continues to pursue is to become recognized as one of the most capable and well-regarded fixed income money managers in the United States.

One of the key areas of interest and attention recently, however, is the increasingly volatile credit markets, as evidenced by the unprecedented collapse of several enormous companies, and the questionable management and accounting irregularities surrounding their collapse. As a result, the ability to evaluate and quantify credit risk beyond the traditional methods has become more important. Consequently, this has been and will continue to be an area to which additional staff resources shall be dedicated. Currently, the senior portfolio manager responsible for managing the credit risk within the portfolio has two analyst/traders concentrating full-time on credit, with assistance from other fixed income staff on a part-time basis. In addition, staff has been able to develop an ongoing



dialog with the external high yield bond managers regarding credit issues, which has proven to be very helpful. It is anticipated that, barring additional programs, any staff approved for hire will be directed to the credit analysis/trading function.

CONCLUSION

Staff recommends the following objectives and budget change proposals for the Investment Committee's consideration:

- ► <u>Investment Committee Objectives</u>
 - o Annual Report: Fixed Income Portfolio
 - Explore the potential use of derivative strategies (options, futures, swaps) for risk management/reduction purposes.
- ➤ 2003-2004 Budget Change proposals
 - One PY for credit analysis/trading



<u>CURRENCY HEDGING PROGRAM BUSINESS PLAN</u>

OBJECTIVES

The Currency Hedging Program was developed in conjunction with the Fund's twenty-percent (20%) strategic allocation to non-dollar equities, all of which have an unhedged performance benchmark. As a result, the ability to hedge (or sell) the underlying foreign currency exposure was intended to preserve the value of the non-dollar equity assets during periods of a strengthening dollar.

MARKET OPPORTUNITY / ENVIRONMENT / CURRENT YEAR BUSINESS PLAN (2002-2003)

CalSTRS adopted its currency hedging policy in 1993, as the non-dollar equity portfolios were being funded. Fifty-percent (50%) of the non-dollar equity assets are managed externally on an active basis and the other fifty-percent (50%) are managed externally on a passive basis. While the active managers are permitted to hedge their assets, and do so in the process of implementing their investment strategy, CalSTRS' fixed income staff developed and implements the System's currency hedging strategy for the passively managed portion.

The current policy and structure for the Currency Hedging Program have been in place for nearly a decade. While periodic reports and updates regarding the program have been presented to the Investment Committee, staff within the External Equity and Fixed Income Units has joined with Callan Associates to study the suitability of the current structure and performance benchmark, much like the research done on the domestic equity and fixed income assets last year. It is anticipated that the team will bring forth its findings and recommendation to the Committee sometime in the second quarter of fiscal year 2002-2003.

MANAGEMENT RESOURCES AND SUCCESS FACTORS

Currency requires both long- and short-term strategies that are being constantly redefined by market participants, as economic assumptions change. Although it involves a potentially significant amount of assets, managing the System's internal portion of the Currency Hedging Program is a satellite program for the Fixed Income Unit. Staff continues to leverage our contacts on Wall Street, asset management firms and other resources, in terms of research and trading in the currency arena, in order to create greater value for CalSTRS' currency program. As a result, staff resources amounting to the equivalent of one full-time position are being allocated to this activity.



While the currency markets are complex and volatile, the ability to integrate technology into the management/analytical/trading process has been and will continue to be critical to being able to implement the program efficiently and effectively. In addition, as mentioned throughout the Business Plans, ensuring that the staff is properly prepared, in terms of training and access to the necessary intellectual and technical resources, will provide the means to achieve the financial objectives of the program.

FUTURE DIRECTION

Given that the Investment Committee will be reviewing the structure and performance benchmark for the Currency Hedging Program this fiscal year, any long-term staffing or other resource needs will be presented as part of that discussion, should revisions to the program be recommended and adopted.

CONCLUSION

Staff recommends the following objectives and budget change proposals for the Investment Committee's consideration:

- ➤ Investment Committee Objectives
 - o Review and recommend program benchmark and policies.
- ➤ 2003-2004 Budget Change proposals
 - o none



HOME LOAN PROGRAM BUSINESS PLAN

OBJECTIVES

The Home Loan Program (HLP) was established as a result of legislation that was designed to provide value to the membership in the form of a mortgage loan at a market rate, while meeting the investment goals of the System by generating a mortgage asset. The assets created by the program are either purchased and managed as part of the mortgage allocation within the fixed income portfolio, or sold in the financial markets.

MARKET OPPORTUNITY / ENVIRONMENT / CURRENT YEAR BUSINESS PLAN (2002-2003)

The HLP has undergone some significant changes over the past several years. Currently, three loan programs are offered through five Correspondent Lenders who are generating approximately \$40 million in mortgage loans every month. The three loan programs include a generic conventional mortgage loan, plus two types of mortgage loans that have been designed to target the affordability/recruitment/retention market in conjunction with the California Housing Loan Insurance Fund (CaHLIF), which is the insurance arm of the California Housing Finance Authority (CHFA). It is these two unique loan programs that have generated the most growth within the HLP. The HLP's focus on affordability and recruitment programs is expected to continue.

In anticipation of this growth dynamic, staff has been focusing its efforts on evaluating and managing not only the risk profile of these loans, but also the intrinsic value of these loans, given the affordability component, which has a distinct value in the fixed income markets. In an attempt to maximize this potential value, CalSTRS has established several strategic alliances within the mortgage markets, including a direct association with both housing agencies (FHLMC and FNMA). It is anticipated that these alliances will provide significant value in developing strategies tailored to CalSTRS' profile and needs.

MANAGEMENT RESOURCES AND SUCCESS FACTORS

Although the Home Loan Program is a satellite program for the Fixed Income Unit, given the increased volume and operationally intensive nature of the program, two full time staff are assigned to this activity. As a result, opportunities to restructure or automate the most routine processes are continuously being explored, so that the staff can spend more time focusing on program enhancements and new strategies and alliances.



The mortgage loan origination industry, within which the HLP operates, is very volatile and competitive, with relatively low profit margins that require high volumes during refinancing cycles to be profitable. Given this environment, in order for CalSTRS to meet its investment objectives, the ideal circumstance is to identify a niche(s) that is of value to both CalSTRS and the marketplace, and focus staff's resources toward becoming proficient at satisfying that particular need. Staff believes that the affordability loan programs represent such a niche that should be further explored.

FUTURE DIRECTION

Over the past several years, HLP staff has concentrated on program revitalization and developing loan programs that address unmet needs within the membership, such as affordability/recruitment/retention issues. Looking forward, staff will pursue opportunities and strategies to develop additional alliances with agencies and organizations that complement the CalSTRS program. For example, in discussions with other state agencies, initial interest has been shown in having the CalSTRS HLP website become a "main hub" of sorts, by providing information on various mortgage loan alternatives for teachers throughout the state. This service could be provided relatively easily, while continuing to offer the current CalSTRS loan programs for those that are eligible and have interest.

CONCLUSION

Staff recommends the following objectives and budget change proposals for the Investment Committee's consideration:

- ➤ Investment Committee Objectives
 - o Annual Report: Home Loan Program
- ➤ 2003-2004 Budget Change proposals
 - o none



SECURITIES LENDING PROGRAM BUSINESS PLAN

OBJECTIVES

The Securities Lending Program is designed to enable the Fund to use its existing asset base of lendable securities and investment expertise to generate incremental income. The performance objective for the program is to earn lending income commensurate with: 1) the market demand for the securities made available for lending and, 2) the return earned on the investment of cash collateral within the guidelines set forth by CalSTRS.

MARKET OPPORTUNITY / ENVIRONMENT / CURRENT YEAR BUSINESS PLAN (2002-2003)

Last year the Securities Lending Program earned more than \$90 million, making 2001 the program's best performing year since its inception in 1988. There were a number of factors that contributed to the performance. The program had just recently been restructured, with more of the cash collateral assets brought in-house, agent lending fee splits were reduced as a result of the restructuring, and the investment markets were as bond-friendly as ever, with the Federal Reserve lowering short-term interest rates an unprecedented 475 basis points.

In light of last year's stellar performance, staff does <u>not</u> anticipate another record year this year. Although the program benefits due to the restructuring are permanent and will continue to add value going forward, it is unlikely that the investment markets will be as favorable. This lack of market momentum will be reflected in a lower return on the cash collateral portion of the lending income. In fact, as discussed in the Fixed Income Portfolio Business Plan earlier, the credit markets have become more volatile, which has resulted in investors, including CalSTRS, becoming much more risk averse and pursuing less risky, lower yielding assets. It is likely that this cautionary strategy will continue through most of the year. As a result, the emphasis within the program will be on risk management.

MANAGEMENT RESOURCES & SUCCESS FACTORS

The Securities Lending Program is another satellite program managed within the Fixed Income Unit. As a result, staff resources amounting to the equivalent of one and one-half positions are assigned to the program, which requires not only portfolio management skills and trading techniques, but also knowledge of the financing markets.

The factors that will facilitate the continued success of the program involve maintaining the quality of the incremental income generated. Although the CalSTRS Securities



Lending Program is structured in such a way as to include many moving parts, processes have been established that monitor and mitigate the risks. Access to updated technology has been and will continue to be essential toward maximizing the efficiency of the program. Continuing education for staff and networking with other lending programs will be valuable contributors, as well.

FUTURE DIRECTION

CalSTRS has been involved in the securities lending markets since their early development and set the pace as an industry leader. Looking forward, staff will continue to pursue opportunities and strategies that will enhance the structure and performance of the program. One such enhancement involves working with other large public and private lenders to develop an industry benchmark for program performance. Being able to gauge the income generated through securities lending on a relative basis would be a valuable tool for evaluating the quality of that income.

CONCLUSION

Staff recommends the following objectives and budget change proposals for the Investment Committee's consideration:

- ► Investment Committee Objectives
 - o Annual Report: Securities Lending Program
- ➤ 2003-2004 Budget Change proposals
 - o none



ALTERNATIVE INVESTMENTS Assets under management: \$5.7 billion

(Alternative Investments and Credit Enhancement)

Business Units:	Personnel Years
 Alternative Investments 	7.5
Credit Enhancement	2.5
Support Staff	<u>1.0</u>
Total Staff	11.0

Potential growth for the next 5 years:

(In billions, except where otherwise indicated)

	6/30/02	2002-03	2003-04	2004-05	2005-06	2006-07
Total CalSTRS Assets	\$100.0	\$107.7	\$115.9	\$124.7	\$133.3	\$143.7
Alternative Investment Assets	\$4.4	\$5.4	\$7.0	\$8.7	\$10.7	\$11.5
# of Investments	126	136	146	158	168	180
Expected investment returns* (\$ in mil.)	(\$440)	\$540	\$700	\$870	\$1,070	\$1,115
Credit Enhancement Program **	\$2.00	\$2.15	\$2.32	\$2.49	\$2.67	\$2.87
Estimated Portfolio	\$1.3	\$1.5	\$1.7	\$1.9	\$2.1	\$2.3
Expected Fees*** (\$ in mil.)	\$3.0	\$3.5	\$3.9	\$4.4	\$4.8	\$5.3
Personnel Years	9	11	13	14	15	15

^{*} Based upon current expected private equity returns of approximately 10%. Actual results may vary significantly.

^{**} Based on the maximum portfolio size of 2% of total CalSTRS assets.

^{***} Based upon historical 23 bp earned fee.



<u>ALTERNATIVE INVESTMENTS BUSINESS PLAN</u>

OBJECTIVES

The primary objective of the Alternative Investment portfolio is to provide enhanced returns over those of the public market. The strategy is to invest in top quartile performing limited partnerships including venture capital, buy-outs, and special situations, and to purchase secondary interests and co-investments. The core portfolio consists primarily of limited partnership investments, while the co-investment and secondary interest investments are pursued on an opportunistic basis.

MARKET OPPORTUNITY/ENVIRONMENT

Historical Returns

The private equity market reflects the ever changing nature of the United States and other world developed economies, with the performance results paralleling the equity markets, but with a different timing, greater risk, and historically, greater returns. The following reflects the net returns of the CalSTRS private equity portfolio over the past 10 years.

Comparison of Net IRR with CalSTRS' Custom Benchmark¹ As of December 31, 2001

	3-Year	5-Year	10-Year	Inception
Net IRR	15.4%	19.6%	20.2%	19.7%
CalSTRS' Custom Benchmark	8.6%	16.7%	19.0%	19.2%

• Allocation Increase to 8%

On November 8, 2001, the Board increased the investment allocation to private equity from 5% to 8% based on the rationale that the private equity class had the best opportunity to provide *alpha* (value added to the expected returns due to active management) to the total CalSTRS portfolio. The value of private equity active management in providing excess returns to a portfolio is demonstrated in the following table:

¹ The current portfolio benchmark is represented by the Russell 3,000 plus 500 basis points, which is adjusted for the first 3 years by the 3 month Treasury bill which reflects the incubation time for the investment to develop. Alternative Investment Advisor makes the calculation.



Asset Class/ Historic performance	First Quartile ¹	Third Quartile ¹	Difference
US Fixed Income ²	6.4%	6.0%	0.4%
US Equities ²	19.4%	14.8%	4.6%
International Equities ²	14.0%	9.8%	4.1%
Real Estate ³ (Opportunistic)	25.9%	9.6%	19.9%
Venture Capital ⁴	25.1%	3.9%	21.2%

- 1. Calculated on a 10 Year Time Horizon
- 2. TUCS 6/30/00
- 3. CalSTRS Consultant 12/31/99
- 4. Venture Economics 12/31/99

As the previous table indicates, value added by Venture Capital far outweighs other asset classes if a first quartile strategy is successfully pursued. Failure to achieve, or come close to achieving first quartile returns provides risk adjusted returns which could fall short of the public market counterparts. Hence, any private equity program must aim on achieving top quartile returns.

Implementation of the Investment Management Plan whose aim is to increase the Alternative Investments asset allocation to 8% of the system total assets will take four to five years, due to the "lumpy" nature of the asset class and the requirement to diversify the portfolio based on vintage years.

• Environmental Review

The year 2001 was challenging for investors due to the overall economic weakness, the technology "bubble" that burst, and the 9/11 attack on the World Trade Center. In 2001 - 02, the economic and stock market weaknesses have led to lower valuations for acquisition candidates for buy-outs, as well as for early and later-stage venture capital financing.² The investment world has changed considerably from the 1990s to the 2000s.

1990s	2000s	
Cold war over	War on terrorism begins	
Government surplus	Government deficit	
Companies buying new technology	Companies delay tech investment	
Dollar strengthening	Dollar weakening	
Oil prices low	Oil prices rising	
Foreigners eager for U.S. stocks	Foreigners pull back from U.S. stocks	
Stock investing is in favor	Stock investing is out of favor	

² USA & Europe 2001 Market Review, Altius Associates, February 2002



UBS Global Asset Management³ reports that the investors view of the public equity markets have changed for the time being due to the earnings expectation abuses by CEOs to get their stock prices up higher, and the consequent accounting practices exaggerations that were utilized by some companies to prop up the earnings results. The result was an inflation in expectations by investors that is still in the process of coming down to earth.

First Quadrant⁴ concurs with the above, and believes that valuations are still high, which will make it difficult for public stocks to outperform bonds. First Quadrant does expect large cap stocks to return a 5.5% return over the next several years. A 4% private equity alpha provides an underlying expected return of 9.5% over a 3-year period. This expected return requires a healthy IPO market. Barton Biggs of Morgan Stanley⁵ provides a 10-year private equity expectation of 9.0% with a 400 basis point alpha, versus the public equity markets.

The market uncertainty is a good environment for the strong private equity investment managers who are experienced and disciplined. The market is favorable for buy-outs as recessions have traditionally been a good time for these investments. The venture capital investment pace is slower as the investment managers wait for indications that the IPO market and capital spending have returned before they ramp up their investment activity. 6

To be successful, a private equity program must be invested with top tier investment managers. Critical success factors include manager selection, diversification with market segments (buyouts, venture capital, and special situations), and time diversification. The industry is currently undergoing an evolution as many of the established general partners have made considerable sums of money and are phasing into retirement. A new generation of private equity managers will be taking the leadership helm at many partnerships. The "science or art" of selecting managers will continue to be a dynamic field and will be most difficult ever.

CURRENT YEAR BUSINESS PLAN

The Alternative Investment Division will pursue the successful strategy of investing in limited partnerships, secondary interests of limited partnerships, and co-investments domestically and in Europe. Investment will aim to commit to top quartile limited partnerships. There is no requirement to achieve the designated investment targets if suitable opportunities are not found. Instead, the investment allocation will be invested in the Russell 3000 in order to keep the exposure in the equity market.

⁵ Global Investment Research, Morgan Stanley, May 6, 2002

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³ "Quarterly Investment Strategy", <u>UBS Global Asset Management</u>, March 31, 2002

⁴ First Quadrant Investment Letter, April 2002

⁶ USA & Europe 2001 Market Review, Altius Associates, February 2002



MANAGEMENT (2002-03)

• Organizational

The AI Division is organized in four separate functional areas as shown in the attached organizational chart:

1) Trade Ticket System/Information Coordination, 2) Credit Enhancement, 3) Co-investments/secondary investments 4) Fund Investing.

• Resources

The AI Division plans to add two investment position 1) An IO I will be added to the Credit Enhancement Unit` on a full time basis to support program growth and consolidate the duties that had been shared by other AI staff, and 2) an IO II will be added to the Private Equity Unit. The position would be responsible for an estimated net 10 partnerships and a \$1.0 billion commitment.

• Information Technology

The AI Division will require the standard personal computers and software for the additional staff. In addition, communication devices to improve efficiencies during travel (e.g., Palm Pilot, Blackberry, laptop) will be in demand.

SUCCESS FACTORS

The ongoing growth in the asset allocation and the growing complexity of the asset class require increases in staffing as well as the ongoing development of the existing staff. Attracting, developing, and retaining Staff is a high priority for the success of the program.

FUTURE DIRECTION (2003-07)

As the Alternative Investment asset portfolio grows in size, the investment professionals will become increasingly specialized by specific investment products. Limited partnerships investment will continue to be the core portfolio activities. Investment in secondary interest on limited partnerships and co-investment are ancillary but important activities

Plans are to add two investment staff in 2003-04. The first investment officer will support the secondary investments and co-investments activities, and the second staff person will support the investment in the limited partnerships activities.

CalSTRS is currently the fourth largest pension fund in the world, and the 8% allocation to alternative investments makes it one of the world largest private equity investors. This requires a dynamic investment policy, an investment organization adapted to the dynamic and changing complexity of the market while maintaining the best practices in this asset class.



CONCLUSION

2002-03 Objectives

The following items represent the key Alternative Investment objectives for 2002-03.

- 1. Staff, working with the Board's Alternative Investment Consultant, will review the Alternative Investment Program Investment policy.
- 2. Staff, working with the Board's Alternative Investment Consultant, will review the Alternative Investment portfolio benchmark.
- 3. Staff, working with the Board's Alternative Investment Consultant, will review the Alternative Investment Program and evaluate it compared to "best governance and practices" practices in the industry.

2003-2004 Budget Change Proposals

The Alternative Investment Division is seeking two additional investment professionals for the 2003-04 fiscal years. One professional will be employed in the secondary investing and co-investing function, and the second will be employed in the fund management function to support growth of the asset under management. A BCP will be required for the positions.



CREDIT ENHANCEMENT PROGRAM 2002-03 BUSINESS PLAN

OBJECTIVES

The CalSTRS Credit Enhancement Program (CEP) generates fee income for the retirement system by underwriting direct pay letters of credit, confirming letters of credit and liquidity facilities. The objectives will remain the same in 2002-03, which are:

- ➤ Generate fee income
- > Strive for zero losses by maintaining a low risk, high quality portfolio
- Diversification

MARKET ENVIRONMENT/OPPORTUNITY

Due to the challenging U.S. environment, the market opportunities for the CEP during the next fiscal year should be favorable. There are a number of factors that contribute to this:

- Increasing CE Demand Given the current economic slow-down, state and local governments will likely experience continued reductions in revenues, while expenses, which are politically difficult to cut, remain static. This should lead to an increasing demand for credit-enhanced borrowings. Credit enhancement opportunities tend to be counter-cyclical.
- Sizable New Transactions Dominate the Market During the next 6 months, over \$10 billion of credit enhancement (CE) will be needed for large, high profile financings. This includes the California Power Bonds, Bay Bridge Project and New York City Metro Transit System. Since this could use up the credit capacity at some banks, other CE financings may receive fewer bids and thus higher fees.
- **Decreasing Credit Capacity** Certain banks, due to losses in their corporate portfolios (i.e., Enron, Global Crossing, and Kmart) will retrench and curtail the issuance of credit across all business units. Although the municipal sectors remain very creditworthy, banks will have less underwriting power and may issue fewer credit enhancements.
- **Deteriorating Bank Ratings** Numerous banks have experienced credit ratings problems, which limit their marketing position in the CE business (e.g., Allied Irish Bank and Commerzbank). As banks' credit ratings deteriorate, fewer players are left and more opportunities are available to the remaining providers.

Based on the above, expectations are for both pricing and the demand for CalSTRS CE to increase. The CEP is well positioned to capitalize on the opportunities.

FISCAL YEAR 2002-2003 BUSINESS PLAN

The following items represent the key CEP objectives for 2002-03:

- 1. Review the CEP policies, primarily the maximum portfolio size and the geographic area
- 2. Outsource the CEP operations



Staff intends to grow the program at a steady pace. However, if the CEP participates in the credit enhancements of the upcoming, large transactions referenced above, the program could rapidly reach the portfolio limit of 2% of CalSTRS assets. This limit was set at the inception of the program eight years ago. It will have to be revisited, with the possibility of increasing it if circumstances warrant it.

In Fall 2001, KPMG conducted an external review of the program to review whether the CEP was operating on a best practices basis. KPMG recommended that CalSTRS review the geographic area in which credit enhancement transactions are underwritten. For effective diversification of the portfolio, KPMG noted it would be prudent to expand the geographic territory to other states, within set benchmarks.

KPMG also recommended CalSTRS consider outsourcing its payment and billing responsibilities to a third party. Staff has concluded it can most effectively capture efficiencies by outsourcing the entire CEP operations. Outsourcing will allow CalSTRS to keep up with improved technology on a cost-effective basis. The outsourcing service will include ongoing surveillance of the portfolio and will provide credit analysis expertise on new and existing CEP transactions. Negotiations are in progress with a servicing agent to provide both the operational support of the CEP and credit analysis services.

MANAGEMENT RESOURCES

Resources

The CEP has grown from a small, emerging program to a "mature" program with \$1.2 billion in commitments and exposure to over 110 transactions. An Investment Officer manages the portfolio on a full time basis with the assistance of the alternative Principal Investment Officer. The alternative system information/ coordinator provides additional operational support. The program employs a part-time student assistant to assist in support functions. It is planned to add one full time Investment Officer I level in the coming year. These two full-time positions, complemented with the outsourcing to a bank service agent, are expected to be adequate to manage the program's growth for the next couple years.

• <u>Services</u>

As mentioned in the above section, the CEP intends to enter into a servicing agent agreement to outsource the CEP operations, credit analysis and monitoring.

SUCCESS FACTORS

The current market environment is anticipated to be favorable for the underwriting of new business. Fiscal year 2002-03 could result in an increase in underwriting of new transactions and revenues generated. Proactive marketing of the CEP is important to its success. Marketing is valuable in uncovering new opportunities, developing relationships with new financial partners and diversifying the portfolio. Strong operational oversight and monitoring of the program is also vital to the success of the program. The new Investment Officer I position and the



outsourcing support will strengthen this function. Staff will require ongoing training to continue building expertise.

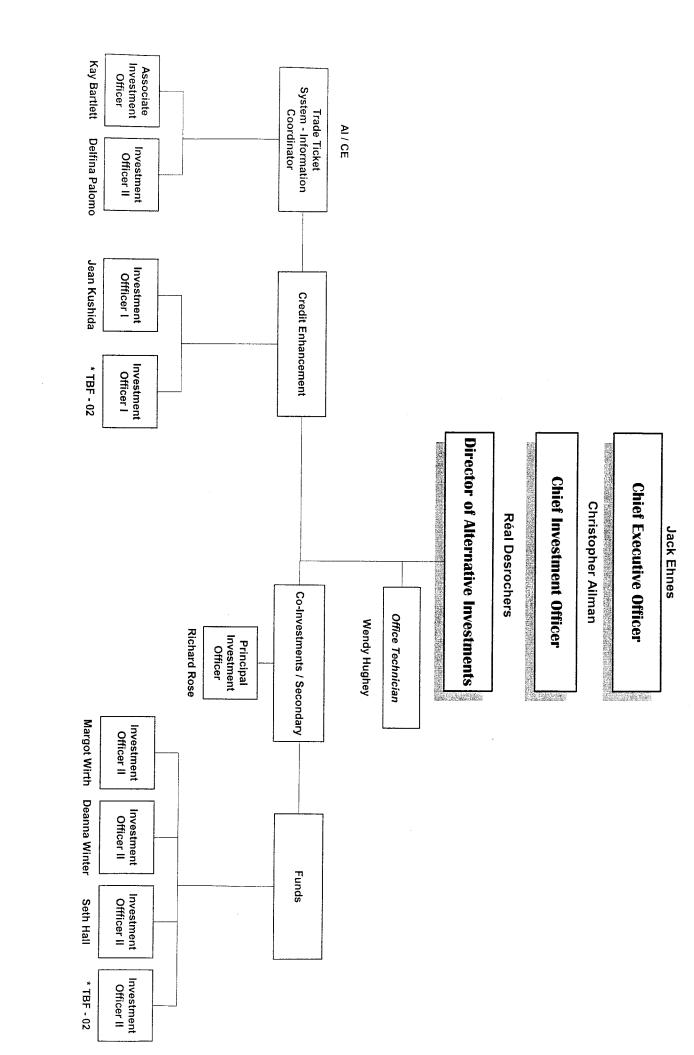
FUTURE DIRECTION

KPMG reported that the portfolio underwriting risk is low. In order to maintain this risk characteristic, high underwriting standards will continue to be utilized and transactions will continue to be underwritten on an opportunistic basis.

CONCLUSION

The 2002-03 focus of the program will be:

- 1. Review the CEP policies, primarily the maximum portfolio size and the geographic area
- 2. Outsource the CEP operations





Attachment 7g Investment Committee – Item 9 July 10, 2002

REAL ESTATE

Assets under management

\$5.3 billion

Business units:

Personnel Years

Professional Staff

Support Staff

Total Staff

Personnel Years

6

1

7

Potential growth over the next 5 years:

(In Billions)

	6/30/02	2002-03	2003-04	2004-05	2005-06	2006-07
Total CalSTRS Assets	\$100.0	\$107.7	\$115.9	\$124.7	\$133.9	\$143.7
Real Estate Assets (7% target)	\$5.3	\$6.0	\$7.0	\$8.0	\$9.0	\$10.0
Incremental Investments	\$0.7	\$1.0	\$1.0	\$1.0	\$1.0	\$1.0
# of Managers/JV Partners	25	30	35	35	30	25
Number of Assets	124	144	164	184	204	224
Expected Investment Returns*	8%+	8%+	8%+	8%+	8%+	8%+
Personnel Years	7	9	9	10	11	11

^{*} These returns are based upon CalSTRS' long-term capital market assumptions; actual results may vary.

OBJECTIVES

The primary objective of the real estate asset class within the overall CalSTRS portfolio is to provide diversification. The secondary objectives are enhanced yield and stable cash flows. Staff's mission is to continue investing directly in stabilized properties that provide strong cash flow as well as seek higher returning investment strategies to ultimately achieve aggregate investment returns in excess of the real estate benchmarks.

MARKET OPPORTUNITY / ENVIRONMENT

The economy continues to send signals that a recovery is underway; however data indicates that the recovery is somewhat anemic. The recession has negatively affected all sectors of property markets. However, based on real estate's favorable returns relative to other asset classes, a significant amount of investment capital continues to flow into the sector. The market uncertainty together with the high degree of capital flows create an environment that encourage sophisticated investors to align themselves with experienced and smart partners and to seek out niche sectors that may be more opportunistic.



Buyers that include pension funds, REITs, foreign capital and high net worth individuals are also taking advantage of the low interest rate environment, further buttressing property pricing. A significant amount of this capital is focused on top tier markets and top tier assets, creating higher pricing and lower yields in these areas. Higher yields may be available in secondary markets and assets.

The chart below indicates the current levels and changes in vacancy rates for all major property sectors. Given the uncertain timing of job creation and real estate's usual two to four quarter lagged response to changes in the economy, some property sectors may not show much improvement until 2003. Most forecasts indicate that further deterioration will occur in both office and industrial well into 2003. The outlook for retail and apartments are not as negative and are believed to be at peak levels currently.

	Office*	Industrial*	Retail**	Apartments**
Current Vacancy Rate	15.4%	10.2%	12.7%	6.4%
% Change from Q4 2001	+1.2%	+0.4%	+0.7%	+0.4%
Expected % Peak	16.6%	11.5%	12.8%	7.0%
Peak Period	Q3 2003	Q1 2003	2002	2002

^{*} Torto Wheaton Research

According to the National Council of Real Estate Investment Fiduciaries ("NCREIF") Property Index, minor write-downs continued in the first quarter of 2002 in all property categories but apartments. Real estate earnings are expected to rebound in response to improved GDP growth, but with lags varying by sector. The 2002 total return for the NCREIF Index is projected to be 7% to 8%.

	Income Return Q1 2002	Appreciation Return Q1 2002
Apartments	1.88%	0.07%
Industrial	1.85%	(0.20%)
Retail	1.22%	(0.39%)
Office	1.74%	(0.94%)
NCREIF Index	1.57%	(0.49%)

The supply/demand balance in the multifamily housing sector is considered relatively favorable among all property types, primarily due to favorable demographics. Because of continuing population dynamics, household formations throughout the age distribution of

^{**} PPR (2002 expected annual rates)



the population are increasing. Offsetting this is the current low interest rate environment, which allows a larger percentage of renters to purchase homes. Due to the generally favorable outlook and significant demand for this product type, core investment opportunities will be difficult to find and execute as the market has fully priced the above influences

Industrial is currently considered a fairly stable sector in terms of supply/demand balance. However, due to its positive fundamentals and desirability, core investment opportunities are competitively sought after. Smaller markets may need to be considered to successfully access this sector.

The retail market segment is perhaps the most difficult to conceptualize because of changing consumer-shopping patterns, which include "commoditization" via big box, etailing and outlet malls. High-end/specialty retailers are currently experiencing significant revenue problems and mergers among large department store merchandisers may begin again. As a result, rent increases in the retail sector may be difficult to accomplish. Among investors, community centers and dominant regional malls are favored property types. Capital flows to these sub sectors have driven up prices.

The office property sector presents a significant challenge at this time, as it has suffered the most vacancy loss due to the economic downturn. After negative absorption of around 100 million square feet during 2001 and deliveries which are now slowing but are likely to approach 50 million square feet during the coming year, vacancy rates will increase, thereby putting downward pressure on rental rates. Additional emphasis will need to be placed on property and asset management dealing with tenant retention and lease negotiations. The volatility in this sector should create opportunistic returns for the tactical investor.

Niche strategies in specialty property types will be appealing, but will require careful and thorough due diligence to substantiate the potential merits of these non-traditional strategies. Furthermore, with the ongoing slowdown of the economy, foreign markets may offer opportunities for better returns in the short term. Real estate debt investments such as mezzanine and CMBS are also being closely scrutinized, as are urban development/redevelopment investments, particularly in "24-hour" cities. CalSTRS will be challenged over the near term to prudently "cast a wider net" to find real estate investments that can produce incremental returns.

CURRENT YEAR BUSINESS PLAN (2002-2003)

Much of current year's Business Plan for the real estate unit is a continuation of the direction set last year. The 2001-2002 Business Plan stated the following objectives:



- Rebalance the portfolio in terms of the composite risk/return profile as well as specified diversification targets.
- Leverage a portion of the portfolio to enhance investment returns.
- ➤ Hire and integrate additional staff in the real estate department.

In terms of rebalancing, Staff has made a number of commitments to joint ventures and commingled funds in the moderate and high risk components of the portfolio that were far below their targets. In addition, the leveraging of the core portfolio currently underway (and subsequent transfer of a portion of those assets to moderate risk) will help with the rebalancing efforts as well as enhancing investment returns. Two experienced real estate professionals were added to the real estate department during the past year. The unit was consequently reorganized by product-type focus to increase staff's effectiveness and efficiency.

In October 2001, the Investment Committee raised the real estate allocation from 5% to 7%. Staff's objective is to prudently invest the capital from the increased allocation and the financing proceeds over a three to four year timeframe. There will be no requirement to invest the additional capital if suitable opportunities cannot be sourced.

The real estate unit's primary goals for the coming year are as follows:

- > Continue to rebalance the portfolio within the low, moderate and high risk categories.
- ➤ Move towards the 7% allocation target.
- > Streamline the investment and partner selection process for a superior investment advantage.
- > Add two new employees to assist the current portfolio managers.

MANAGEMENT AND RESOURCES

<u>Organization</u>: The real estate unit is organized by the four traditional property types, with each portfolio manager responsible for the managers and assets within that type and across all three risk levels.

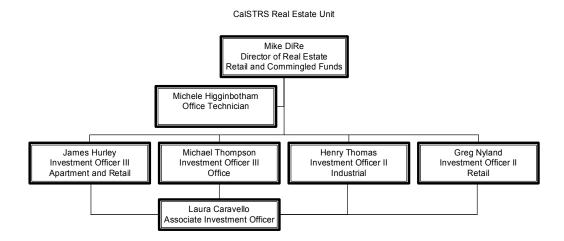
<u>Resources</u>: The real estate unit has approval for two new employees. Subject to the State's hiring freeze, the two positions are currently targeted for junior portfolio managers that will assist current staff as needed.



<u>Information Technology</u>: Increased deal flow creates the need for increased travel, thus increasing the need for travel-related technology (e.g., laptop computers, PDAs, external access to e-mail) for work efficiency.

<u>Training</u>: Due to increasingly complex transactions and staff's strategy to invest in joint venture and fund structures, training to hone negotiation and business development skills of existing and future staff will be necessary.

The CalSTRS Real Estate Asset Management team is structured as follows:



SUCCESS FACTORS

CalSTRS is evolving historically from a low-risk real estate investment strategy to higher yielding and more complex investment strategies. It is prudent and imperative to attract and retain experienced, talented staff to successfully implement the program. Another factor critical to success is a fluid decision-making process in order to execute all investment decisions expeditiously. This issue has been greatly enhanced over the past year. Staff will continue to streamline the process in order to improve its reputation as the "buyer of choice".

Real estate is an asset class that requires a higher degree of active oversight. The changing market conditions and increasingly complex nature of the investments will produce an increase in the amount of travel and training required by staff. CalSTRS must also effectively utilize the consultant and independent fiduciaries to enhance its flexibility and extend its capabilities.



FUTURE DIRECTION

Staffing in the real estate unit will grow by two over the coming year and be well positioned to carry out the business plan over the next two to three years. Over the longer term, staffing is projected to increase by four additional professionals to a total of eleven by 2005. As staff is added, they will have greater specialization and be dedicated to specific areas of investment, such as international, opportunistic fund and joint venture strategies.

CalSTRS is a significant institutional investor by virtue of its size. It is the goal of the real estate staff to become an industry leader through a well defined, efficient and consistent investment approach combined with knowledgeable and experienced professionals. The ultimate result will be the achievement of returns in excess of the market and the benchmark.

CONCLUSION

Staff plans on continuing to rebalance the real estate portfolio within the guidelines of the new leverage policy while moving prudently towards the 7% allocation. To enhance returns and increase effectiveness, staff will continue to streamline the investment and partner selection process.

Staff recommends the following objectives and budget change proposals for the Investment Committee's consideration:

- ► Investment Committee Objectives
 - o Implement plan for urban real estate and affordable housing investments

Attachment 8 Investment Committee – Item 9 July 10, 2002

PROPOSED RESOLUTION OF THE TEACHERS' RETIREMENT BOARD INVESTMENT COMMITTEE

SUBJECT: Business Plans for 2002/2003
Resolution No
WHEREAS, the Investment Committee of the California State Teachers' Retirement Board is responsible for recommendation to the Board, investment policy and overall investment strategy for the management of the Teachers' Retirement Fund, a multi-billion dollar public pension plan; and
WHEREAS, the Investment Committee has received and reviewed writter recommendation for the 2002/2003 Business Plans and the Long-Term Investment Branch Business Plan from Staff; and
WHEREAS, the Investment Committee has heard the oral presentations from Staff Therefore, be it
RESOLVED, that the Investment Committee of California State Teachers' Retirement Board adopt the 2002/2003 Business Plans and the Long-Term Investment Branch Business Plans
Adopted by: Investment Committee on July 10, 2002
Jack Ehnes

Chief Executive Officer